

Chemistry BA

Overview

The Department of Chemistry is one of the oldest departments in the university and has a long record of preparing students for careers in science. Since a significant portion of America's chemical industry is centered in the Philadelphia region, there is a wide range of career opportunities locally available. Although most of our students have gone on to medicine, dentistry or the chemical industry, recent graduates have also gone on to careers in law, forensics and even art restoration.

The **Bachelor of Arts in Chemistry** is designed for students who are planning for a non-research career in a field related to chemistry. Students learn a wide array of topics in chemistry, mathematics and physics. Students learn how to write scientific reports, analyze data and place these results in a broader scientific context.

Campus Location: Main

Program Code: ST-CHEM-BA

Distinction in Major

To graduate with distinction in this major, a student must have a minimum 3.33 GPA in all the Chemistry courses required for the major.

Accelerated Programs

Accelerated programs provide a pathway for students to pursue both an undergraduate degree and an advanced degree in a shorter amount of time. Below is a list of available accelerated programs for students in the BA in Chemistry.

- BA in Chemistry / MEd in Middle Grades Education with a Concentration in Science
- BA in Chemistry / MEd in Middle Grades Education with a Concentration in Science and Language Arts
- BA or BS in Chemistry / PSM in Forensic Chemistry
- Dental 3+4 Program
- Pharmacy 3+4 Program
- Podiatry 3+4 Program

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Learn more about the Bachelor of Arts in Chemistry.

These requirements are for students who matriculated in academic year 2024-2025. Students who matriculated prior to fall 2024 should refer to the Archives to view the requirements for their Bulletin year.

Bachelor of Arts Requirements

Summary of Requirements for the Degree

1. University Requirements (123 total s.h.)

- Students must complete all University requirements including those listed below.
- All undergraduate students must complete at least two writing-intensive courses for a total of at least six credits at Temple as part of their major. The specific writing-intensive course options for this major are:

Code	Title	Credit Hours
CHEM 3398	Physical Chemistry Laboratory II	2
CHEM 4196	Instrumental Analysis	5

- Students must complete the General Education (GenEd) requirements.
 - See the General Education section of the *Undergraduate Bulletin* for the GenEd curriculum.
 - Students who complete CST majors receive a waiver for 2 Science & Technology (GS) and 1 Quantitative Literacy (GQ) GenEd courses.
- Students must satisfy general Temple University residency requirements.

2. College Requirements

- A minimum of 90 total credits within the College of Science & Technology (CST), the College of Liberal Arts (CLA), and/or the College of Engineering (ENG).
 - A minimum of 45 of these credits must be upper-level (courses numbered 2000 and above).
 - A minimum of 6 of these credits must be upper-level (courses numbered 2000 and above) CLA credits.
- Successful completion or waiver from the second level of a foreign language.
- Complete a one-credit first-year or transfer seminar.
 - SCTC 1001 CST First Year Seminar for every entering first-year CST student.
 - SCTC 2001 CST Transfer Seminar for every entering transfer CST student.

3. Major Requirements for Bachelor of Arts (51-53 s.h.)

At least 7 courses required for the major must be completed at Temple. At least 5 Chemistry courses must be completed at Temple.

Code	Title	Credit Hours
Chemistry		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	

CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2211 & CHEM 2213	Organic Chemistry for Majors I and Organic Majors Laboratory I (F)	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		4
CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2212 & CHEM 2214	Organic Chemistry for Majors II and Organic Majors Laboratory II (S)	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
CHEM 3103 & CHEM 3105	Analytical Chemistry and Analytical Chemistry Lab	4
CHEM 3301	Physical Chemistry Lecture I	3
CHEM 3302	Physical Chemistry Lecture II	3
CHEM 3398	Physical Chemistry Laboratory II	2
CHEM 4196	Instrumental Analysis	5
Mathematics		
MATH 1041 or MATH 1941	Calculus I Honors Calculus I	4
MATH 1042 or MATH 1942	Calculus II Honors Calculus II	4
Select one of the following:		2-4
MATH 2042	Multivariable Calculus	
MATH 2043	Calculus III	
MATH 2943	Honors Calculus III	
Physics		
Select one of the following:		4
PHYS 1061	Elementary Classical Physics I	
PHYS 1961	Honors Elementary Classical Physics I (F)	
PHYS 2021	General Physics I	
PHYS 2921	Honors General Physics I (F)	
Select one of the following:		4
PHYS 1062	Elementary Classical Physics II	
PHYS 1962	Honors Elementary Classical Physics II (S)	
PHYS 2022	General Physics II	
PHYS 2922	Honors General Physics II (S)	
Total Credit Hours		51-53
Code	Title	Credit Hours
(F) - Fall only course		
(S) - Spring only course		

Suggested Academic Plan

All prospective majors should schedule an appointment with one of the departmental advisors (names of current faculty advisors are available in the Overview section) to plan a program of study. The recommended order of courses for the major is listed below; a different order is acceptable as long as the student adheres to prerequisite requirements.

Bachelor of Arts in Chemistry

Suggested Plan for New Students Starting in the 2024-2025 Academic Year

Year 1		Credit Hours
Fall		
Select one of the following:		4
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I (F)	
MATH 1041 or MATH 1941	Calculus I or Honors Calculus I	4
SCTC 1001	CST First Year Seminar	1
ENG 0802 or ENG 0812 or ENG 0902	Analytical Reading and Writing [GW] or Analytical Reading and Writing: ESL [GW] or Honors Analytical Reading and Writing [GW]	4
Elective		2
Credit Hours		15
Spring		
Select one of the following:		4
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	
CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II (S)	
MATH 1042 or MATH 1942	Calculus II or Honors Calculus II	4
IH 0851 or IH 0951	Intellectual Heritage I: The Good Life [GY] or Honors Intellectual Heritage I: The Good Life [GY]	3
Elective		4
Credit Hours		15
Year 2		
Fall		
Select one of the following:		4
CHEM 2201 & CHEM 2203	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2211 & CHEM 2213	Organic Chemistry for Majors I and Organic Majors Laboratory I (F)	
CHEM 2921 & CHEM 2923	Organic Chemistry for Honors I and Organic Honors Laboratory I (F)	
Select one of the following:		4
PHYS 1061	Elementary Classical Physics I	
PHYS 1961	Honors Elementary Classical Physics I (F)	
PHYS 2021	General Physics I	
PHYS 2921	Honors General Physics I (F)	
Select one of the following:		2-4
MATH 2042	Multivariable Calculus	
MATH 2043	Calculus III	
MATH 2943	Honors Calculus III	
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good [GZ] or Honors Intellectual Heritage II: The Common Good [GZ]	3
Elective		2-0
Credit Hours		15
Spring		
Select one of the following:		4

CHEM 2202 & CHEM 2204	Organic Chemistry II and Organic Chemistry Laboratory II	
CHEM 2212 & CHEM 2214	Organic Chemistry for Majors II and Organic Majors Laboratory II (S)	
CHEM 2922 & CHEM 2924	Organic Chemistry for Honors II and Organic Honors Laboratory II (S)	
Select one of the following:		4
PHYS 1062	Elementary Classical Physics II	
PHYS 1962	Honors Elementary Classical Physics II (S)	
PHYS 2022	General Physics II	
PHYS 2922	Honors General Physics II (S)	
GenEd Breadth Course		3
Electives		5
Credit Hours		16
Year 3		
Fall		
CHEM 3302	Physical Chemistry Lecture II	3
Foreign Language 1001 - First Level		4
GenEd Breadth Course		3
Electives		5
Credit Hours		15
Spring		
CHEM 3103	Analytical Chemistry ¹	3
CHEM 3105	Analytical Chemistry Lab ¹	1
CHEM 3301	Physical Chemistry Lecture I	3
Foreign Language 1002 - Second Level		4
GenEd Breadth Course		3
Electives		2
Credit Hours		16
Year 4		
Fall		
CHEM 3398	Physical Chemistry Laboratory II [WI]	2
Upper-level CLA Course (numbered 2000 and above)		3
GenEd Breadth Course		3-4
Electives		7-6
Credit Hours		15
Spring		
CHEM 4196	Instrumental Analysis [WI]	5
Upper-level CLA Course (numbered 2000 and above)		3
GenEd Breadth Course		3
Electives		5
Credit Hours		16
Total Credit Hours		123

Code	Title	Credit Hours
(F) - Fall only course		
(S) - Spring only course		

¹ It is strongly encouraged that CHEM 3103/CHEM 3105 be taken before all chemistry laboratory courses numbered above 3105.

Accelerated Programs

Students may opt to pursue an accelerated +1 program, enabling them to complete both a bachelor's degree and master's degree in less time than the traditional route.

The following accelerated programs may be of interest to students in the Chemistry BA:

College of Science and Technology

- Bioinnovation PSM
- Forensic Chemistry PSM

College of Education and Human Development

- Middle Grades Education MEd with Science concentration
- Middle Grades Education MEd with Science and Language Arts concentration
- Secondary Education MEd with Science Education concentration

Accelerated Health Programs

- Dental 3+4 Program
- Medical 3+4 Program
- Pharmacy 3+4 Program
- Physical Therapy 3+3 Program
- Podiatry 3+4 Program